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New data on the distribution of some Megachilinae (Hymenoptera: Apoidea: Megachilidae) in Romania

C. BAN-CALEFARIU & T. LJUBOMIROV

A b s t r a c t : The present work provides data on the distribution of 46 Megachilinae species in Romania. The previous reports are summurized for each species, together with newly studied material and accompained with distribution map by provinces in Romania. The species *Osmia mustelina* GERSTAECKER 1869 and *Chalicodoma parietina* (GEOFFROY 1785) are mentioned for the second time in the Romanian fauna, being reported only the southern and south-western part of the country.

K e y   w o r d s : Hymenoptera, Megachilidae, Romania, distribution.

Introduction

The Osmiini and Megachilini are widely distributed around the world, except South America and Australia where Osmiini are not found (MICHENER 2000). In Romania, 52 species of the Osmiini tribe and 39 species of the Megachilini tribe are reported up to now (BAN-CALEFARIU 2009 in press).

The first reports on the wild bees of Romania date since the half of the 19th century by the systematic lists on the fauna of Transylvania. The credit for this goes to the Transylvanian School of Natural Sciences which guided the first hymenopterological studies of our country. Data on megachilids were published by HENRICH (1880-1883), MOCSÁRY (1874, 1897), MÓCZÁR & PALL (1907), SZILÁDY (1914), ZILAHI-KISS (1915), IUGA & SCOBIOLA-PALADE (1959), CONSTANTINESCU (1976), ZANDEN & MATACHE (1986), AFTENE & GOAGĂ (1993), GOAGĂ et al. (1999), PASCU (2003), MATACHE & BAN (2006) and TOMOZEI (2006). Significant contributions to the knowledge of Megachilidae had AFTENE, within the period 1972-1995 (AFTENE, 1972, 1973, 1976, 1979, 1995); she recorded 123 species and 5 forms of 20 genera, out of which 22 species were reported for the first time in the Romanian fauna.

Material and methods

Bee material used for this paper comes from the specialists' collecting of "Grigore Antipa" National Museum of Natural History (Bucharest) conducted during the periods 1995-1998 and 2003-2008 in the frames of some research projects regarding biodiversity of different areas in Romania; in addition, the scientific collections of "Grigore Antipa"

Museum (Bucharest) and Brukenthal National Museum (Sibiu) were studied. For the identification of the Megachilidae species the first author used the papers of OSYCHNYUK et al. (1978) and BANASZAK & ROMASENKO (2001). The nomenclature is according to UNGRICHT et al. (2008) for Osmiini tribe and to BANASZAK & ROMASENKO (2001) for Megachilini tribe (only *Chalicodoma*, *Megachile* and *Coelioxys* genera).

The material orginates from 94 localities and collecting sites, presented for each county, (Table 1 and Fig. 1):

Distributional maps include the literature data and on the field collecting for each species; new reports are marked with ■, and those from literature are marked with ●.

Results

Subfamily Megachilinae includes 46 species from 2 tribes and 7 genera accounted in the following list. For each species are given: previous reports, studied material (regarding specimens number, sex, collecting site, and gathering data), and the distribution map in Romania.

Subfamily M e g a c h i l i n a e

Tribe O s m i i n i

Genus *Chelostoma* LATREILLE

Chelostoma campanularum (KIRBY 1802)

P r e v i o u s   r e c o r d s : Mehadia, Oradea, Româneşti, Sibiu, Siseşti (HENRICH 1881, MOCSÁRY 1897, ZANDEN & MATACHE 1986), Ineu, Măgura Cisnădiei, Retezat Mountains (AFTENE 1995).

N e w   m a t e r i a l   s t u d i e d : 1♂, Slătioara River, 9.VII.1995; 1♂, Pietrosul Rodnei, 10.VII.1995; 1♂, Izvorul lui Dragoş, 13.VII.1995; 2♂♂, Colibi, 9.VII.1996; 4♂♂, Văleni, 7.VII.1995; 1♂, Crasna Vişeu, 19.VII.2004; 1♂, Făina, 21.VII.2004; 1♂, Poienile de sub Munte, 25.VII.2004; 1♂, Dragomireşti, 22.VI.2003; 1♂, Bratcu Valley, 6.VII.2004; 1♂, 1♀, Gura Bârsei Chalet, 4.VII.2004; 1♂, Valea cu Peşti, 6.VIII.2004 (Fig. 2).

Chelostoma distinctum STOECKHERT 1929

P r e v i o u s   r e c o r d s : Bacău, Plopeni, Sibiu, Tatlageac (AFTENE 1995).

N e w   m a t e r i a l   s t u d i e d : 1♂, "Podul Slătioarei" Forest Range, 6.VII.1995; 1♂, Hututeanca Stream Valley, 17.VI.2003; 1♂, Idişor Stream, 23.VI.2003; 1♂, Sărata, 25.VI.2004 (Fig. 3).

Chelostoma florisomne (LINNAEUS 1758)

P r e v i o u s   r e c o r d s : Işelniţa, Leleşti, Ocna Sibiului, Sibiu (AFTENE 1979, ZANDEN & MATACHE 1986), Covasna, Racova (AFTENE & GOAGĂ 1993), Dumbrava Sibiului, Ineu, Leleşti, Lereşti, Poenarii Rali, Sadu River, Retezat Mountains-Zlata Chalet, Târgu Jiu, Şura Mică, Ştezii Valley (AFTENE 1995), Bârsa Valley (TOMOZEI 2006).

N e w   m a t e r i a l   s t u d i e d : 2♂♂, 2♀♀, Dumbrava Sibiului, 25.V.1996; 2♂♂, Săpânciora Valley, 20.V.1996; 2♂♂, Repedea-Smereceni Clearing, 22.VI.1997, Elmo Clearing, 24.VI.1997; 2♂♂, Pietroşani, 28.IV.2004; 1♂, Copăniţa, 17.V.2004; 1♀, Lainici Monastery, 7.VII.2004; 2♂♂, Sărata, 4.V.2005, 2♂♂, 28.IV.2008; 2♀♀, Scorei, 21.VIII.2004; 1♂, Valea lui Ivan, 27.VI.2003; 4♂♂, 2♀♀, Valea Fagilor, 24.V.2005; 2♂♂, Comana, 4.V.2006 (Fig. 4).

Chelostoma rapunculi (LEPELETIER De SAINT-FARGEAU 1841)

P r e v i o u s   r e c o r d s : Cocoş Monastery (CONSTANTINESCU 1976); Borsec, Braşov, Sibiu, Oradea, Mehadia (HENRICH 1880, MOCSÁRY 1897), Başta, Lespezi, Ocna Sibiului, Petroşani, Sibiu, Siseşti, Techirghiol, Târgu Jiu (ZANDEN & MATACHE 1986), Izvoarele, Piliş, Retezat Mountains, Saschiz, Tatlageac, Sadu Valley (AFTENE 1995), Bârsa Valley (TOMOZEI 2006).

N e w   m a t e r i a l   s t udied: 2♂♂, Sibiu, 26.VI.1930; 1♀, Cehu Silvaniei, 14.VII.1929; 1♂, Valea cu Peşti, 6.VIII.2004; 3♂♂, Sărata, 21, 23, 26.VI.2004; 1♂, Bârsana, 5.VII.1995; 2♂♂, Izvorul lui Dragoş, 13.VII.1995; 1♂, Săpânţa-Brustani Clearing, 13.VII.1996; 1♂, Slava Rusă, 19. VII.2006; 1♂, Săldăbagiu Mic, 13.VII.2008 (Fig. 5).

Genus *Heriades* SPINOLA

Heriades crenulatus NYLANDER 1856

P r e v i o u s   r e c o r d s : Aiud, Oradea, Orşova, Tăşnad, Tihuţa (MOCSÁRY 1897), Ocolişul Mare, Runcul Salvei (SZILÁDY 1914), Sagna (IUGA & SCOBIOLA-PALADE 1959), Istria (AFTENE & GOAGA 1993), Ocna Sibiului, Sibiu (PASCU 2003), Balta Verde, Beciu, Caraorman, C. A. Rosetti, Cluj, Crişan, Gura Motrului, Plăeţu, Sadu River, Sulina, Târnava Mare, Vameş, Văleni, Venchi, Voineşti (AFTENE 1973, ZANDEN & MATACHE 1986), Bucov, Ineu (AFTENE 1995).

N e w   m a t e r i a l   s t u d i e d : 1♀, Işelniţa, 21.VI.1970; 1♀, Repedea-Smereceni Clearing, 22.VIII.1997; 1♀, Vaser Valley, transect Bardău-Cozia, 22.VII.2004; 1♀, Valea cu Peşti, 6.VIII.2004 (Fig. 6).

Heriades truncorum (LINNAEUS 1758)

P r e v i o u s   r e c o r d s : Aiud, Ighiel, Mirăslău (SZILÁDY 1914), Cluj, Ocna Sibiului, Oradea, Sibiu, Şura Mică, Tuşnad (MOCSÁRY 1897, PASCU 2003), Bacău, Bicaz, Ineu, Istria, Murighiol, Păuşeşti, Retezat, Schitu Goleşti, Târnava (AFTENE & GOAGA 1993, AFTENE 1995), Arad, Beciu, C. A. Rosetti, Cluj, Lespezi, Măglaşi, Mera, Răşinari, Sadu River, Sinaia, Târgu Jiu (ZANDEN & MATACHE 1986).

N e w   m a t e r i a l   s t u d i e d : 1♀, Caraorman, 12.VIII.1967; 1♀, Ieud, 4.VII.1995; 1♀, Poienile de sub Munte, 30.VI.1997; 1♀, Reşiţa, 10.VIII.2001; 1♂, 1♀, Chitu Valley, 9.VII.2004; 1♀, Alba, 7.IX.2005; 1♀, Scorei, 21.VIII.2004; 1♀, Cernica, 29.IV.2007 (Fig. 7).

Genus *Hoplitis* KLUG

Hoplitis anthocopoides (SCHENCK 1853)

P r e v i o u s   r e c o r d s : Cheia, Gheorghieni, Plăeţu, Tâmpa (ZANDEN & MATACHE 1986).

M a t e r i a l : 2♂♂, Polatişte, 7.VII.2004 (Fig. 8).

Hoplitis claviventris (THOMSON 1872)

P r e v i o u s   r e c o r d s : Ileanda (ZILAHI-KISS 1915), Cristuru Secuiesc (AFTENE 1972), Bacău, Brăteşti, Izvoarele (ZANDEN & MATACHE 1986).

N e w   m a t e r i a l   s t u d i e d : 1♂, Leordina, 22.VIII.1997; 1♂, Sărata, 23.VI.2004; 1♂, Bratcu Valley, 6.VII.2004 (Fig. 9).

Hoplitis manicata MORICE 1901

P r e v i o u s   r e c o r d s : Arad, Ocna Sibiului, Comarova, Rusu, Sibiu, Slobozia (ZANDEN & MATACHE 1986).

N e w   m a t e r i a l   s t u d i e d : 2♂♂, Guşteriţa, VII.1919; 3♂♂, Bistra Valley, 28.VI.1997; 2♂♂, Tarniţa-Schitul Locurele, 8.VII.2004; 1♂, Crasna Vişeului, the confluence Hututeanca-Pop Ivan, 18.VII.2004 (Fig. 10).

Hoplitis papaveris (LATREILLE 1799)

P r e v i o u s   r e c o r d s : reported as *Anthocopa papaveris* from Sibiu (HENRICH 1881), Sărata, Valu lui Traian (ZANDEN & MATACHE 1986), Gherăeşti (AFTENE & GOAGĂ 1993), Ocna Sibiului (AFTENE 1995).

N e w   m a t e r i a l   s t u d i e d : 1♂, Techirghiol, VI.1932 (Fig. 11).

Hoplitis praestans (F. MORAWITZ 1894)

P r e v i o u s   r e c o r d s : 1♂, Suluc Valley, 27.V.2005 (MATACHE & BAN 2006) (Fig. 12).

Hoplitis ravouxi (PÉREZ 1902)

P r e v i o u s   r e c o r d s : Cristian (ZANDEN & MATACHE 1986).

N e w   m a t e r i a l   s t u d i e d : 3♀♀, Bistra, 28.VI.1997, 24.VII.2004; 2♀♀, Mara, 17.VII.1998; 2♀♀, Polatişte, 7.VII.2004 (Fig. 13).

Genus *Osmia* PANZER

Osmia bicolor (SCHRANK 1781)

P r e v i o u s   r e c o r d s : Mehadia (AFTENE 1972), Aiud (SZILÁDY 1914), Româneşti (AFTENE 1976), Căldăruşani, Comana (ZANDEN & MATACHE 1986), Leamna, Păuleşti, (AFTENE 1995), Ocna Sibiului (PASCU 2003).

N e w   m a t e r i a l   s t u d i e d : 1♂, Perіş, 8.IV.1953; 1♂, Ştefăneştii de Jos, 24.IV.1953; 4♀♀, Cernica, 29.V.1956, 9.VI.1956; 3♀♀, Ţigăneşti, 5.VI.1957, 26.IV.1966; 1♀, Băneasa, 23.IV.1958; 2♀♀, Căldăruşani, 31.V.1957, 29.V.1965; 1♀, Comana, 29.V.1965; 1♀, Pietroşani, 28.IV.2004 (Fig. 14).

Osmia bicornis (LINNAEUS 1758)

P r e v i o u s   r e c o r d s : reported as *Osmia rufa* in Transylvania (MOCSÁRY 1897), Abrud, Aiud, Mirăslău (SZILÁDY 1914), Bucureşti, Căldăruşani, Cernica, Cisnădie, Comana, Feleacu, Giurgiu, Islaz, Izvoare, Mera, Pasărea, Perіş, Ploieşti, Snagov, Sibiu, Şura Mică, Tălmaciu, Ţigăneşti (HENRICH 1880, AFTENE 1973, 1976, ZANDEN & MATACHE 1986, PASCU 2003), Cocoş Monastery (CONSTANTINESCU 1976), Plopana, Racova (AFTENE & GOAGĂ 1993), Târgu Mureş, Blejoi, Craiova, Dobrogea, Ineu, Plopeni, Româneşti, Saschiz (AFTENE 1995).

N e w   m a t e r i a l   s t u d i e d : 1♂, Sibiu, 7.III.1976; 3♂♂, Bucureşti, 15.IV.1943, 2♂♂, 4.IV.1953, 1♂, 23.VI.1953, 1♂, 26.II.1958; 1♂, 7♀♀, Pasărea Forest, 7.IV.1946, 24.IV.1952, 13.VI.1999, 2.V.2006; 1♂, Cernica, 30.III.1947; 2♀♀, Perіş, 4.V.1953; 4♀♀, Comana, 31.V.1956; 2♀♀, Izvorul cu Nuci, 7.VI.2006; 1♂, Căldăruşani, 23.III.1957; 2♂♂, Snagov, 4,

25.IV.1957; 2♀♀, Ţigăneşti Monastery, 4.V.1957, 24.IV.1966; 2♂♂, Mogoşoaia, 15.IV.1954, 1♀, Luncaviţa, 24.V.2005; 7♂♂, 21♀♀, Sărata, 2, 4, 6.V.2005; 1♂, Izvorani, 11.IV.2006; 2♀♀, Bucureşti-Park of "Grigore Antipa" Museum, 5.IV.2005, 17.IV.2006, 1♀, Village Museum, 4.IV.2006; 2♂♂, 1♀, Dragomireşti, 14.IV.2006; 1♀, Padina Tătarului, 4.V.2006 (Fig. 15).

Osmia brevicornis (FABRICIUS 1798)

Previous records: Cisnădie, Mehadia, Ocna Sibiului, Oradea, Oraviţa, Sibiu (HENRICH 1882, MOCSÁRY 1897, PASCU 2003), Aiud (SZILÁDY 1914); Bucureşti, Budeşti, C. A. Rosetti, Ciolpani, Luncaviţa, Periprava (ZANDEN & MATACHE 1986), Ineu, Eforie, Uzlina (AFTENE 1995).

New material studied: 1♂, 2♀♀, Greci, 25.V.2005; 1♂, Cerna, 26.V.2005; 1♂, Suluc Valley, 27.V.2005 (Fig. 16).

Osmia caerulescens (LINNAEUS 1758)

Previous records: Aiud (SZILÁDY 1914), Cristuru Secuiesc (AFTENE 1972), Mâneciu Ungureni (AFTENE 1973), Pucheni (AFTENE 1976), Mănăstirea Cocoş (CONSTATINESCU 1976), Apahida, Başta, Berghiu, Budieni, Caraorman, C. A. Rosetti, Crişan, Flămânda, Iteşti, Ocna Sibiului, Odaia, Odăile, Pucheni, Şegarcea, Sfântu Gheorghe, Sibiu, Stăniţa, Şura Mică, Turnu Măgurele, Voineşti (AFTENE 1979, ZANDEN & MATACHE 1986, PASCU 2003), Murighiol (AFTENE & GOAGĂ 1993), Arad, Budeşti, Măgurele, Uzlina (AFTENE 1995).

New material studied: 1♂, 1♀, Bucureşti, 21.VI.1950, 8.V.1953; 1♀, Periş, 4.V.1953; 1♀, Copăceni, 28.VI.1953; 1♀, Săbăreni, 3.VI.1955; 1♂, 2♀♀, Comana, 31.V.1956; 1♂, Ciolpani, 4.VI.1957; 1♀, Cernica, 12.V.1963; 2♀♀, Pietroşani, 28.IV.2004; 2♂♂, Valea Fagilor, 24.V.2005; 1♀, Scorobia Valley, 7.VII.2000; 1♂, 1♀, Sărata, 3, 6.V.2005 (Fig. 17).

Osmia cerinthidis MORAWITZ 1876

Previous records: Cristuru Secuiesc (AFTENE 1972), Bucureşti, Feleacu, Horia, Ocna Sibiului, Ploieşti, Sibiu, Sinaia, Ţigăneşti (ZANDEN & MATACHE 1986), Cheia (AFTENE 1995).

New material studied: 4♂♂, Bucureşti-Park of "Grigore Antipa" Museum, 5.IV.2005; 1♂, Comana Forest, 7.VI.2006; 1♂, Pasărea Forest, 13.VI.1999 (Fig. 18).

Osmia cornuta (LATREILLE 1805)

Previous records: Izvoare (AFTENE 1973), Cocoş Monastery (CONSTATINESCU 1976), Sibiu, Sadu Valley, Veştem (AFTENE 1979, PASCU 2003), Bucureşti, Budeşti, Chilia Veche, Dunărea Veche, Giarmata, Izvoarele, Mogoşoaia, Nucet, Periş, Podu Lacului, Runcu, Sfântu Gheorghe, Snagov, Turnu Măgurele (ZANDEN & MATACHE 1986), Bucov, Craiova, Iaşi, Ineu, Ploieşti (AFTENE 1995).

New material studied: 1♀, Cernica Forest, 12.V.1963; 1♀, Pasărea Forest, 24.IV.1964; 1♀, Sărata, 2.V.2005, 3♂♂, 28.IV.2008; 15♂♂, 4♀♀, Comana, 10.IV.2005; 4♂♂, 1♀, Bucureşti-Park of "Grigore Antipa" Museum, 9.III.2005, 5.IV.2005, 10♂♂, 14♀♀, Village Museum, 4.IV.2006; 1♀, Izvorani, 11.IV.2006 (Fig. 19).

Osmia leaiana (KIRBY 1802)

Previous records: Mehadia, Tuşnad, Vâlcele (AFTENE 1972), Mâneciu Ungureni (AFTENE 1973), Chiciureni, Cluj, Eforie Sud, Gheorghieni, Comarova Forest, Someşeni, Straja, Vânători, Voineşti (ZANDEN & MATACHE 1986), Amara, Crişan, Mărgineni, Nicolae Bălcescu (AFTENE & GOAGĂ 1993), Sibiu, Sadu Valley (PASCU 2003), Murighiol, Uzlina (AFTENE 1995).

New material studied: 1♀, Bucureşti, 8.VI.1943; 1♂, Periş, 18.VI.1959; 1♀, Cernica Forest, 26.VIII.2005 (Fig. 20).

Osmia mustelina GERSTAECKER 1869

Previous records: reported by MOCSÁRY (1897) and AFTENE (1972) from Orşova, as *Osmia emarginata.*

New material studied: 1♂, Balta Ialomiţei, 21.VIII.2006 (Fig. 21).

Tribe Megachilini

Genus *Chalicodoma* LEPELETIER

Chalicodoma parietina (GEOFFROY 1785)

Previous records: Mehadia (MÓCZÁR, PALL 1907 citated by AFTENE 1972).

New material studied: 1♀, Topolniţa Monastery, 19.IV.2007 (Fig. 22).

Genus *Megachile* LATREILL3E

Megachile alpicola ALFKEN 1924

Previous records: Dumbrava, Ocna Sibiului, Româneşti, Sibiu, Sighişoara (ZANDEN & MATACHE 1986), Slănic (AFTENE & GOAGĂ 1993).

Material: 1♀, Giurgiu, 20.VI.1938; 1♀, Guşteriţa, 31.VIII.1938; 1♂, Sighişoara, 19.VII.1950; 2♀♀, Mara, 17, 18.VII.1998 (Fig. 23).

Megachile centuncularis (LINNAEUS 1758)

Previous records: Bacău, Bistreţ, Brăneşti, Brăteşti, Broşteni, Caraorman, C. A. Rosetti, Gura Motrului, Haţeg, Histria, Ocna Sibiului, Oradea, Periprava, Periş, Preajba, Sfântu Gheorghe, Sibiu, Snagov, Sulina, Turnişor (HENRICH 1880, MOCSÁRY 1897, AFTENE 1979, ZANDEN & MATACHE 1986, PASCU 2003), Ocolişul Mare, Poiana Aiudului (SZILÁDY, 1914), Cristuru Secuiesc (AFTENE, 1972), Cocoş, Celic Dere and Niculiţel Monasteries (CONSTANTINESCU 1976), Bijghir (AFTENE & GOAGĂ 1993), Bucureşti, Ineu, Islaz, Iţcani, Păuleşti, Plopeni, Podu Iloaiei, Reghin, Retezat Mountains, Sfăteşti, Sighişoara, Simnic, Şura Mică, Videle (AFTENE 1995).

New material studied: 1♀, Agigea, 18.VII.2003; 1♀, Mangalia Nord, 19.VII.2003; 2♀♀, Alba, 7.IX.2005; 1♀, Babadag, 19.VII.2006 (Fig. 24).

Megachile lagopoda (LINNAEUS 1761)

Previous records: Bârseşti, Caraorman, Călimăneşti, Măgura Cisnădiei, Pituluşa, Stăniţa, Sibiu (HENRICH 1880, AFTENE 1979, 1995, ZANDEN & MATACHE 1986, PASCU 2003), Sohodol Gorges (GOAGĂ et al. 1999); Mehadia (AFTENE 1972), Cocoş and Celic Dere Monasteries (CONSTANTINESCU 1976), Craiova, Islaz (AFTENE 1995).

New material studied: 1♂, Săpânţa-Brustani Clearing, 10.VII.1996; 1♀, Peştera, 26.VIII.2003 (Fig. 25).

Megachile lapponica THOMSON 1872

Previous records: Tihuţa, Tuşnad (MOCSÁRY 1897), Halânga (ZANDEN & MATACHE 1986), Cordun, Tiha (AFTENE 1995).

New material studied: 1♀, Poienile de sub Munte, 19.VII.2004 (Fig. 26).

Megachile leucomalla GERSTAECKER 1869

Previous records: Brăteşti, Broşteni, Mera, Traian (AFTENE 1979, ZANDEN & MATACHE 1986), Băile Herculane, Ciupelniţa, Craiova, Simnic (AFTENE 1995).

New material studied: 1♀, Ocna Sibiului, 13.VII.1973; 1♀, Bucureşti-Podul Ciurel, 25.VIII.2005; 1♀, Brăneşti, 27.VI.2007 (Fig. 27).

Megachile ligniseca (KIRBY 1802)

Previous records: Oraviţa, Tuşnad (MOCSÁRY 1897), Ciuguzel, Ighiel, Ineu (ZILAHI-KISS 1915), C. A. Rosetti, Eforie Sud, Guşteriţa, Odaia (ZANDEN & MATACHE 1986), Pleniţa, Podu Ilioaiei (AFTENE 1995).

New material studied: 1♀, Bei Valley, 21.IX.2000; 1♂, Bratcu Valley, 6.VII.2004; 1♂, Rica River Valley, 25.VII.2004; 1♂, Pasărea Forest, 5.VI.2005; 1♂, Bucureşti-Village Museum, 4.IV.2006; 1♂, Comana, 4.V.2006 (Fig. 28).

Megachile melanopyga EVERSMANN 1852

Previous records: Revetiş (AFTENE 1972), Aiud (SZILÁDY 1914), Cocoş Monastery (CONSTANTINESCU 1976), Băile Herculane, Babadag, Brăteşti, Caraorman, C. A. Rosetti, Ocna Sibiului, Periprava, Sibiu, Techirghiol, Valu lui Traian (ZANDEN & MATACHE 1986, AFTENE 1995, PASCU 2003), Gura Văii (AFTENE & GOAGĂ).

New material studied: 1♂, Cosiştei Valley, 23.VII.2007 (Fig. 29).

Megachile nigriventris SCHENCK 1867

Previous records: Chiochiş (ZILAHI-KISS 1915), Tiha (MOCSÁRY 1874, 1897), Podu Iloaiei, Târgu Jiu (AFTENE 1995).

New material studied: 1♂, Guşteriţa, 26.IV.1930; 1♂, Moara Domnească, 12.VI.2008 (Fig. 30).

Megachile octosignata NYLANDER 1852

Previous records: Poiana Aiudului (SZILÁDY 1914), Branişte, Brăteşti, Broşteni, Cordun, Floreşti, Liţa, Mehadia, Odaia, Odobeşti, Oradea, Posada, Sibiu, Sighişoara, Turnu Măgurele, Vărsătura, Viile (MOCSÁRY 1874, 1897, HENRICH 1880, AFTENE 1979, ZANDEN & MATACHE 1986), Histria, Nicolae Bălcescu (AFTENE & GOAGĂ 1993), Bistra-Deda, Filiaşi, Murighiol, Podu Iloaiei, Reghin, Suceava (AFTENE 1995).

New material studied: 1♀, Şeica Mare, 28.VI.1979; 1♀, Vlaşin, 6.IX.2006 (Fig. 31).

Megachile pilicrus F. MORAWITZ 1878

Previous records: Ighiel (SZILÁDY 1914), Tăşnad, Mehadia, Revetiş (MOCSÁRY 1897), Arad, C. A. Rosetti, Caraorman, Islaz, Păuşeşti, Periprava, Sibiu (ZANDEN & MATACHE 1986, AFTENE 1995).

New material studied: 1♂, Mangalia Nord, 19.VII.2003; 1♂, Alba, 20.VII.2006; 1♀, Suluc Valley, 18.VII.2006; 1♀, Slava Rusă, 19.VII.2006; 1♂, Brăneşti, 27.VI.2007 (Fig. 32).

Megachile pilidens ALFKEN 1924

Previous records: Cocoş Monastery (CONSTANTINESCU 1976), Amărăşti, Caraorman, C. A. Rosetti, Cristian, Flămânda, Izvoare, Odobeşti, Techirghiol, Turnu Măgurele, Valu lui Traian

(AFTENE 1979, 1995, ZANDEN & MATACHE 1986), Ocna Sibiului, Podu Iloaiei, Sibiu (AFTENE 1995).

New material studied: 1♂, Ocna Sibiului, 2.VI.1947; 1♂, Babadag Lake, 19.VII.2006 (Fig. 33).

Megachile rotundata (FABRICIUS 1787)

Previous records: Bacău, Hemeiuşi, Histria (AFTENE & GOAGĂ 1993), C. A. Rosetti, Histria, Tatlageac (AFTENE 1995), Sagna, Tuşnad (IUGA & SCOBIOLA-PALADE 1959, AFTENE 1972), Arad, Cârcea, Cristian, Floreşti, Hetiur, Ocna Sibiului, Odaia, Flămânda, Turnu Măgurele, Şura Mică, Vameş, Viile (AFTENE, 1979; PASCU, 2003; ZANDEN & MATACHE 1986), Craiova, Păuleşti, Podu Iloaiei, Posada, Reghin, Simnic, Suceava (AFTENE 1995).

New material studied: 1♂, Dumbrava Sibiului, 2.VII.1953, 1♀, Ocna Sibiului, 7.VII.1954, 1♀, 13.VII.1973; 2♂♂, Agigea, 18.VII.2003; 1♀, Brăneşti, 27.VII.2006; 1♀, Moara Domnească, 12.VI.2008 (Fig. 34).

Megachile versicolor F. SMITH 1844

Previous records: Oradea, Mehadia, Sighişoara, Văliug (AFTENE 1972, MOCSÁRY 1874, 1897), Aiud (SZILÁDY 1914), Arad, Băile Herculane, C. A. Rosetti, Eforie Sud, Ghighiu, Horia, Liţa, Sibiu, Turnu Măgurele, Şeica-Hamba (AFTENE 1979, ZANDEN & MATACHE 1986, PASCU 2003), Poenarii Burchi (AFTENE 1995).

New material studied: 1♂, C. A. Rosetti, 28.IX.1980; 1♀, Crasna Vişeului, 23.VIII.1997; 1♀, Gârliştei Gorges, 8.VIII.2001; 1♂, Bratcu Valley, 6.VII.2004 (Fig. 35).

Megachile willughbiella (KIRBY 1802)

Previous records: Baziaş, Cordun, Mehadia, Sfântu Gheorghe, Sibiu, Tiha, Văliug (MOCSÁRY 1874, 1897, AFTENE 1979), Criţ (SZILÁDY 1914), Arad, Branişte, Ocna Sibiului, Pieleşti, (ZANDEN & MATACHE 1986), Gura Văii (AFTENE & GOAGĂ 1993), Brăneşti, Bucureşti, Budieni, Dobârca, Plopeni, Stăniţa (AFTENE 1995).

New material studied: 1♂, Ieud, 4.VII.1995; 1♂, Agigea, 18.VII.2003; 1♂, Făina, 21.VII.2004; 1♂, Ţigăneşti Monastery, 16.VI.2005; 1♂, Brăneşti, 27.VII.2006; 1♂, 1♀, Moara Domnească, 12.VI.2008 (Fig. 36).

Genus *Coelioxys* LATREILLE

Coelioxys afra LEPELETIER De SAINT-FARGEAU 1841

Previous records: Arad, Guşteriţa, Sărvăzel, Turda, Tăşnad (MOCSÁRY 1897, ZANDEN & MATACHE 1986), Filiaşi (IUGA & SCOBIOLA-PALADE 1959), Albeşti, Craiova, Sibiu (AFTENE 1995).

New material studied: 1♂, Cehu Silvaniei, 20.VII.1929; 1♂, Ocna Sibiului, VII.1946; 1♂, Budeşti, 13.VIII.1948; 1♀, Băile Victoria, 16.VII.1963; 1♂, Tuzla, 21.VII.2003 (Fig. 37).

Coelioxys aurolimbata A. FÖRSTER 1853

Previous records: Amara, Revetiş, Sibiu, Simişna, Târgu Mureş, Zalău (HENRICH 1880, 1883, MOCSÁRY 1897, ZANDEN & MATACHE 1986), Aiud, Trascău (SZILÁDY 1914), Bocşa (ZILAHI-KISS 1915).

New material studied: 1♂, Sibiu, VII.1896; 1♂, Bârsana, 5.VII.1995; 1♀, Frăţeşti, 16.V.2002; 1♂, Manafu Forest, 22.VI.2006 (Fig.38).

Coelioxys caudata SPINOLA 1838

Previous records: Arad, Caraorman, C. A. Rosetti (ZANDEN & MATACHE 1986).

New material studied: 1♂, Valu lui Traian, 24.VI.1964; 1♂, Agigea, 23.VII.1964; 1♂, Brăneşti, 27.VI.2007 (Fig. 39).

Coelioxys elongata LEPELETIER DE SAINT-FARGEAU 1841

Previous records: Işelniţa, Sfântu Gheorghe, Sibiu, Tiha (MOCSÁRY 1897, AFTENE 1972, ZANDEN & MATACHE 1986, PASCU 2003), Secui (AFTENE 1995).

New material studied: 1♂, Sibiu, 1♂, 26.VI.1930, 1♂, 1♀, VI, VII.1946; 1♀, Agigea, 18.VII.2003; 1♀, Celic Dere Monastery, 8.IX.2005 (Fig. 40).

Coelioxys haemorrhoa A. FÖRSTER 1853

Previous records: Filiaşi (IUGA & SCOBIOLA-PALADE 1959).

New material studied: 1♂, Frăţeşti, 30.VII.1948 (Fig. 41).

Coelioxys inermis (KIRBY 1802)

Previous records: Sibiu, Tuşnad (HENRICH 1880, AFTENE 1972, PASCU 2003), C.A. Rosetti (ZANDEN & MATACHE 1986).

New material studied: 1♀, Sibiu, 4.VII.1948 (Fig. 42).

Coelioxys mandibularis NYLANDER 1848

Previous records: Tăşnad (MOCSÁRY 1897), Cheia (AFTENE 1995).

New material studied: 1♂, Pasărea Forest, 13.VI.1999 (Fig. 43).

Coelioxys polycentris A. FÖRSTER 1853

Previous records: Sibiu (SZILÁDY 1914, AFTENE 1979, PASCU 2003).

New material studied: 3♀♀, Ocna Sibiului, 9.IX.1940; 1♂, Sibiu, 14.VIII.1952 (Fig. 44).

Coelioxys quadridentata (LINNAEUS 1758)

Previous records: Sibiu (MOCSÁRY 1897), Murighiol (AFTENE 1995).

New material studied: 1♀, Băile Herculane, 11.VII.1963 (Fig. 45).

Coelioxys rufescens LEPELETIER De SAINT-FARGEAU et AUDINET-SERVILLE 1825

Previous records: Bocşa (ZILAHI-KISS 1915), Aiud, Băile Herculane, Ocna Sibiului, Sân Martin, Sibiu (SZILÁDY 1914, AFTENE 1972, ZANDEN & MATACHE 1986, PASCU 2003); Prunet, Secui (AFTENE 1995).

New material studied: 1♀, Sibiu, VI.1946; 1♂, Crasna Vişeului, 23.VIII.1997 (Fig. 46).

Coelioxys rufocaudata F. SMITH 1854

Previous records: Sibiu (HENRICH 1883), Sagna (IUGA & SCOBIOLA-PALADE 1959), Arad (ZANDEN & MATACHE 1986); Tatlageac (AFTENE 1995).

N e w m a t e r i a l s t u d i e d : 1♀, Guşteriţa, without other data; 1♂, Odaia, 12.VI.1949 ; 1♀, C. A. Rosetti, 20.VII.1966 (Fig. 47).

Discussion

The 46 identified species represent about 37 % of the total of the megachilid species known in Romania at present; most of them originate in Transylvania (centre of the country), Muntenia (Wallachia, south) and Dobrogea (Dobroudja, south-east), regions which offer confortable niches for these thermophilous and heliophilous species by their geographical position, clime and vegetation.

Chalicodoma parietina, reported 100 years before from Caraş-Severin (Banat region, south-western of the country) was considered extinct from Romania, not being mentioned in other faunistic lists. In 2007, a female specimen was collected from Mehedinţi (Oltenia region, south-west), the species being reported from the first time in this region and for the second time in Romania. *Osmia mustelina* is distributed in South and Central Europe, North Africa; in Romania it was reported from Mehedinţi in literature, and now we report it from Muntenia (south of the country).

Zusammenfassung

Vorliegende Arbeit behandelt die Verbreitung von 46 Megachilinae-Arten (Hymenoptera, Apoidea) Rumäniens. Bisher bekannte publizierte Daten wurden gemeinsam mit selbst erfassten Daten dargestellt und wurden auch mittels Verbreitungskarten den Provinzen Rumäniens zugeordnet. *Osmia mustelina* GERSTAECKER 1869 und *Chalicodoma parietina* (GEOFFROY 1785) stellen Zweitnachweise des Untersuchungsgebietes dar, welche bisher nur aus dem südlichen und südwestlichen Teil des Landes bekannt wurden.

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Addresses of the authors: Cristina BAN-CALEFARIU
"Grigore Antipa" National Museum of Natural History
Department of Terrestrial Fauna, 1
Kiseleff Street
RO-011341 Bucharest, Romania
E-mail: cristban@antipa.ro

TOSHKO LJUBOMIROV
Institute of Zoology, Bulgarian Academy of Sciences
1, Tzar Osvoboditel Boulevard
BG-Sofia 1000, Bulgaria
E-mail: tljubomirov@zoology.bas.bg

Table 1: List of the material collecting localities and collecting sites.

County	Locality	Collecting site
Argeş	Pietroşani	Pietroşani
Argeş	Sătic	Scorobia Valley
Argeş	Sătic	Valea cu Peşti
Argeş	Sătic	Valea lui Ivan
Bihor	Săldăbagiu Mic	Săldăbagiu Mic
Braşov	Băile Victoria	Băile Victoria
Braşov	Zărneşti	Gura Bârsei Chalet
Braşov	Peştera	Peştera
Bucureşti	Bucureşti	Băneasa
Bucureşti	Bucureşti	Village Museum
Bucureşti	Bucureşti	Park of "Grigore Antipa" Museum
Bucureşti	Bucureşti	Podul Ciurel-Lacul Morii
Caraş Severin	Băile Herculane	Băile Herculane
Caraş Severin	Caraşova-Gârliştei Gorges	Caraşova-Gârliştei Gorges
Caraş Severin	Reşiţa	Reşiţa
Caraş Severin	Bei Valley	Bei Valley
Călăraşi	Budeşti	Budeşti
Constanţa	Agigea	Agigea
Constanţa	Olimp-Mangalia Nord	Olimp-Mangalia Nord
Constanţa	Techirghiol	Techirghiol
Constanţa	Tuzla	Tuzla
Constanţa	Valu lui Traian	Valu lui Traian
Giurgiu	Balta Bila-Manafu Forest	Balta Bila-Manafu Forest
Giurgiu	Comana	Comana
Giurgiu	Copăceni	Copăceni
Giurgiu	Copăniţa	Copăniţa

County	Locality	Collecting site
Giurgiu	Frăţeşti	Frăţeşti
Giurgiu	Giurgiu	Giurgiu
Giurgiu	Padina Tătarului	Padina Tătarului
Giurgiu	Comana	Comana Forest-Izvorul cu Nuci
Giurgiu	Săbăreni	Săbăreni
Giurgiu	Vlaşin-Ogarca Forest	Vlaşin-Ogarca Forest
Gorj	Jiu Valley-Lainici Monastery	Jiu Valley-Lainici Monastery
Gorj	Polatişte	Polatişte
Gorj	Tarniţa	Schitul Locurele
Gorj	Bratcu Valley	Bratcu Valley
Gorj	Chitu Valley	Chitu Valley
Ialomiţa	Borduşani	Balta Ialomiţei
Ilfov	Brăneşti	Pasărea Forest
Ilfov	Căldăruşani	Căldăruşani
Ilfov	Cernica	Cernica
Ilfov	Ciolpani	Ţigăneşti Monastery
Ilfov	Dragomireşti	Dragomireşti
Ilfov	Izvorani	Izvorani
Ilfov	Mogoşoaia	Mogoşoaia
Ilfov	Moara Domnească	Moara Domnească
Ilfov	Periş	Periş
Ilfov	Snagov	Snagov
Ilfov	Ştefăneştii de Jos	Ştefăneştii de Jos
Maramureş	Bârsana	Bârsana
Maramureş	Bistra	Bistra
Maramureş	Călineşti-Văleni	"Săcătura" Forest Range
Maramureş	Crasna Vişeu	the confluence Hututeanca-Pop Ivan
Maramureş	Crasna Vişeu	Hututeanca Stream Valley
Maramureş	Dragomireşti	Baicu Forest Range
Maramureş	Ieud	Ieud
Maramureş	Leordina	Leordina
Maramureş	Mara	Mara
Maramureş	Moisei-Izvorul lui Dragoş	Moisei-Izvorul lui Dragoş
Maramureş	Pietrosul Rodnei	Pietrosul Rodnei
Maramureş	Poienile de sub Munte	Coşnea Chalet
Maramureş	Poienile de sub Munte	Rica River Valley
Maramureş	Repedea	Smereceni Clearing
Maramureş	Repedea	Elmo Clearing
Maramureş	Săliştea-Idişor Stream	Săliştea-Idişor Stream
Maramureş	Săpânţa	Brustani Clearing
Maramureş	Săpânţa	Colibi
Maramureş	Săpânţa	Săpânciora Valley
Maramureş	Strâmtura	Slătioara River-Berşota Stream

County	Locality	Collecting site
Maramureş	Strâmtura	Podul Slătioarei Forest Range
Maramureş	Vaser Valley	Făina
Maramureş	Vaser Valley	transect Bardău-Cozia
Mehedinţi	Isverna-Cosiştei Valley	Isverna-Cosiştei Valley
Mehedinţi	Işelniţa	Işelniţa
Mehedinţi	Topolniţa Monastery	Topolniţa Monastery
Mureş	Sighişoara	Sighişoara
Sălaj	Cehu Silvaniei	Cehu Silvaniei
Sibiu	Sibiu	Dumbrava Sibiului
Sibiu	Sibiu	Guşteriţa
Sibiu	Ocna Sibiului	Ocna Sibiului
Sibiu	Sărata	Sărata
Sibiu	Scorei	Scorei
Sibiu	Sibiu	Sibiu
Sibiu	Şeica Mare	Şeica Mare
Teleorman	Odaia	Odaia
Tulcea	Alba	Alba
Tulcea	Babadag	Babadag Forest-Slava Rusă
Tulcea	Babadag	Babadag Lake
Tulcea	C.A. Rosetti	C.A. Rosetti
Tulcea	Caraorman	Caraorman
Tulcea	Cerna	Cerna
Tulcea	Greci	Greci
Tulcea	Luncaviţa-Valea Fagilor	Luncaviţa-Valea Fagilor
Tulcea	Celic Dere	Celic Dere Monastery
Tulcea	Suluc Valley	Suluc Valley